

	IECEX TEST REPORT IEC 60079-31 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure “t”
ExTR Reference Number.....: ExTR Free Reference Number: Compiled by + signature (ExTL): Reviewed by + signature (ExTL).....: Date of issue:	CZ/FTZU/ExTR 14.0003/04 14 IECEx 0003/04 Ing.Jiří Ambrož Ing.Lukáš Martinák 01.02.2021  
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Standard.....: Test procedure: Test Report Form Number:	IEC 60079-31:2013, 2 nd edition IECEx System ExTR60079-31_2A (released 2014-01)
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<p>Possible test case verdicts:</p> <ul style="list-style-type: none"> - test case does not apply to the test item:N / A - test item does meet the requirement:Pass
<p>General remarks: The test results presented in this Ex Test Report relate only to the item or product tested.</p> <ul style="list-style-type: none"> ▪ "(see Attachment #)" refers to additional information appended to this document. ▪ "(see appended table)" refers to a table appended to this document. ▪ Throughout this document, a point is used as the decimal separator. <p>The technical content of this Ex Test Report shall not be reproduced except in full without the written approval of the Issuing ExCB and ExTL.</p>

IEC 60079-31			
Clause	Requirement – Test	Result – Remark	Verdict
1	Scope		
2	Normative references		
3	Terms and definitions		
4	General		
4.1	Levels of protection	tb Db	Pass
4.2	Equipment groups and ingress protection	tb- IP 6x	Pass
4.3	Requirements for electrical equipment with level of protection "ta"		
4.3.1	Fault current	No used , only "tb"	NA
4.3.2	Maximum surface temperature	No used , only "tb"	NA
4.3.3	Overpressure	No used , only "tb"	NA
4.3.4	Dust exclusion	No used , only "tb"	NA
4.3.5	Protective devices		
4.3.5.1	General	No used , only "tb"	NA
4.3.5.2	Thermal protective devices	No used , only "tb"	NA
4.3.6	Protection for arcing and sparking parts	No used , only "tb"	NA
4.4	Requirements for electrical equipment with Level of Protection "tb" and "tc"		
4.4.1	Maximum surface temperature	Only service temperature – Ex- component	NA
4.4.2	Over pressure	see cl. 6.1.3.	Pass
4.4.3	Dust exclusion	see cl. 6.1.1.	Pass
5	CONSTRUCTION		
5.1	Joints		
5.1.1	General	see cl. 6.1.1.	Pass
5.1.2	Threaded joints	> 5 - threads M80x1,5 – cover –o-ring M 20x1.5 > 3.5 – threads 1/2NPT `3/4 NPT As alternative using type taper threads Rc ^{1/2} , Rc ^{3/4} , BSPT ^{1/2} , BSPT ^{3/4} and cylindrical threads G ^{1/2} , G ^{3/4} , G ^{3/8} , BSPP ^{1/2} , BSPP ^{3/4} , BSPP ^{3/8} for only process threaded joint D ₁ . see Application manual N-L2236	Pass
5.1.3	Gaskets and seals	o-rings , see drawings	Pass
5.1.4	Cemented joints	Cemented window, length min.10 mm	Pass

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Clause	Requirement – Test	Result – Remark	Verdict
5.1.5	Operating rods, spindles and shafts	No used	NA
5.1.6	Windows		
5.1.6.1	Windows employing a cemented joint	Used Cemented window	Pass
5.1.6.2	Windows employing a gasket joint	Not used	NA
5.2	Cable glands	Can be used Ex - cable glands with IP 6X	Pass
5.3	Entries		
5.3.1	Plain entries	Not used	NA
5.3.2	Threaded entries	"tb" ; "M"- threads – min 5 threads; 6H !NPT"- threads – min.3 threads	Pass

6	Verification and tests		
6.1	Type tests		
6.1.1	Type tests for dust exclusion by enclosures		
6.1.1.1	General	see Ex Tr IEC 60079-0:	Pass
6.1.1.2	Impact test for supplementary enclosures	Not used	NA
6.1.1.3	Pressure test	used overpressure static test (65bar/60s) The test was satisfactory	Pass
6.1.1.4	IP test	; IP 6X – satisfactory; on request IP68 – satisfactory – see ExTr 60079-0	Pass
6.1.2	Thermal tests	Not used; empty enclosure	NA
6.2	Routine tests		

7	Marking	Ex tb IIIC Db	Pass
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Measurement Section, including Additional Narrative Remarks (as deemed applicable)			